



PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

MICHAEL SCOTT
Acting Director

June 23, 2016

Jeffrey Ferguson
Unimin Corporation – Environmental Affairs
136 Crystal Drive,
Spruce Pines, NC 28777


RE: ***Remedial Investigation Work Plan***
Unimin Facility
136 Crystal Drive, Spruce Pines, NC
IHSB ID # Unassigned NON CDOO 02930

Dear Mr. Ferguson,

Our office has completed a review of the Remedial Investigation Work Plan, submitted on June 16, 2016, for a fluoride release discovered at the Unimin Facility located at 136 Crystal Drive, Spruce Pines, NC. At this time the Work Plan is approved. Please proceed with the investigation and submit an update Remedial Investigation Report within 90 days receipt of this letter.

If you have any questions, concerning this remedial investigation request, please contact me at (336) 776-9678.

Sincerely,


Thomas Moore,
Hydrogeologist, IHSB Western Region



1125 E. Morehead Street, Suite 104
Charlotte, NC 28204-2819

Office (980) 585-1271
Facsimile (980) 585-1272

MAAONLINE.COM

June 16, 2016

Mr. Thomas Moore, Hydrogeologist
NC Department of Environmental Quality, Winston-Salem Regional Office
Division of Waste Management, Superfund Section-IHSB Western Region
450 West Hanes Mill Road, Suite 300
Winston-Salem, North Carolina 27105

Subject: **Remedial Investigation (RI) Work Plan** (phase I work plan)
Unimin – Spruce Pine Fluoride Release
136 Crystal Drive, Spruce Pine, NC
Mid-Atlantic Project: 000H-1036.00

Dear Mr. Moore:

Mid-Atlantic Associates, Inc. (Mid-Atlantic) submits for your review and approval our work plan for the above site (the "subject property"). This work plan is submitted to satisfy the requirements discussed in our teleconference on June 10, 2016 along with your follow-up e-mail correspondence of the same date.

Project Purpose

The purpose of this scope is to:

1. Install two additional groundwater monitoring wells on the Unimin property to document groundwater conditions and groundwater flow.
2. Solicit permission from the property owner at 91 Azalea Drive to sample the on-site potable drinking water well.
3. Collect one potable well water sample from the residence located at 91 Azalea Drive. This well is the only documented potable supply well within 1,500 feet of the subject property.
4. Revise the previously submitted Fluoride Investigation Summary Report, dated March 17, 2016 to include a summary of the activities proposed herein, along with supporting data, laboratory sheets and an updated receptor survey map.

In response to our discussions and NCDENR's, requested assessment, Mid-Atlantic proposes the following work plan:

Monitoring Well Installation

Mid-Atlantic will contract a North Carolina licensed drilling firm to install two, Type II PVC groundwater monitoring wells on the Unimin Property. One of these wells will be located between the potable well located at 91 Azalea Drive and the suspected fluoride release area on the Unimin property. The second well will be installed topographically up-gradient of the release. These wells, in addition to the existing monitoring well, MW-1, located in the suspected release area, will enable Mid-Atlantic to document groundwater flow direction and groundwater quality.

Each monitoring well will be installed to an estimated depth of 30 feet below existing grade, with the bottom 15 feet of the well installed with 0.010 slotted screen. Based on the location, these wells are anticipated to be installed as flush-to-grade wells. Each well will be given a unique identification number and secured within a bolt-down well vault. Wells will be capped with a locking cap. We propose to designate these wells as MW-2 and MW-3.

Well Sampling

Upon completion of the groundwater well installation, the depth to groundwater will be measured. Based on the static water column, the volume of water in the well will be calculated and three volumes purged from each well prior to sampling. Water will be removed from each well by using a unique polyethylene bailer for each well. Clean nitrile gloves will be used for each sampling event. One trip blank sample will also be collected for quality assurance.

The drinking water well will be sampled by running the water from an existing internal or external tap until the purge tank is emptied and the well engages to provide a representative drinking water sample.

Water Analysis

Each groundwater sample will be collected in clean, laboratory supplied glassware and sampled for 8 RCRA metals, Fluoride and pH. Samples collected for analysis will be delivered to Pace Analytical Services, a North Carolina-accredited laboratory for analysis.



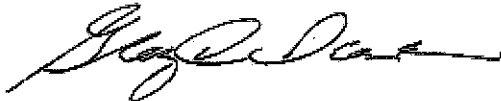
Report Preparation

Upon receipt of laboratory data, Mid-Atlantic will summarize our activities and findings by revising the previously submitted Fluoride Investigation Summary Report. This report revision will include updated receptor survey information previously provided for NCDEQ review, along with other areas as outlined in the IHSB RI report format.

Should there be questions concerning this Work Plan, please contact the undersigned at (980) 585-1271.

With best regards,

MID-ATLANTIC ASSOCIATES, INC.



Greg D. Icenhour, P.G., MBA
Principal Geologist

cc: Jeff Ferguson, P.E.
Elizabeth N. Leaderman, Esq.



Mid Atlantic
Engineering & Environmental Solutions



Legend

- UNIMIN SITE
- PARCEL BOUNDARY
- WATER SUPPLY WELL
- 100 FOOT CONTOUR
- 10 FOOT CONTOUR



REFERENCE: DATA FROM MITCHELL COUNTY COUNTY GIS, MID-ATLANTIC FIELD NOTES.

PROPOSED MONITORING WELL LOCATIONS
UNIMIN CORPORATION
136 CRYSTAL DRIVE
SPRUCE PINE, NORTH CAROLINA

DRAWN BY: <i>gdi</i>	DATE: JUNE 20, 2016
DRAFT CHECK BY:	JOB NO.: 000H1036.00
ENGINEER CHECK BY:	GIS NO.: 4G-000H1036.00-3
APPROVED <i>gdi</i>	DRAWING NO.: 2